

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 October 2005 (20.10.2005)

PCT

(10) International Publication Number  
**WO 2005/098650 A1**

(51) International Patent Classification<sup>7</sup>: **G06F 17/00**,  
A63F 13/00

(21) International Application Number:  
PCT/AU2005/000502

(22) International Filing Date: 7 April 2005 (07.04.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2004901841 7 April 2004 (07.04.2004) AU

(71) Applicant and

(72) Inventor: **RYAN, Phillip** [AU/AU]; 1/57 Cowper Wharf  
Road, Woolloomooloo, NSW 2011 (AU).

(81) Designated States (*unless otherwise indicated, for every  
kind of national protection available*): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,  
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every  
kind of regional protection available*): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**  
— with international search report

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: **PLAYER CONTROLS**

(57) **Abstract:** The patent involves the use of a personal Storage Device with memory which can store the unique biometrics of its registered owner for the purposes of identification; can record the unique biometrics of any person attempting to use the device; can confirm whether the user is the registered owner of the device; can control access to electronic devices and their consumption; can monitor and record the operational activity of its user; can store pre-defined value, duration and budgetary constraints; can compare operational activity to pre-defined values, durations and budgetary constraints; can store legal tender value; can visually indicate when it is electronically operative; can be electronically locked and de-activated; and can connect and communicate directly or remotely to other electronic devices. The device can be used in the identification and elimination of problem gamblers from gaining personal access to electronic gaming machines and other gambling devices or services whilst either physically present at a gambling venue or through their remote access to a gambling venue or gambling service via the internet, interactive television, intranets, extraneous, telephones or other digital communication services. In its USB derivative format the device can connect directly or remotely to the ubiquitous USB outlet of electronic devices without the need for additional and expensive electronic reader or writer hardware



**WO 2005/098650 A1**

## **PLAYER CONTROLS**

### **OVERVIEW**

This complete patent specification relates to the identification and elimination of problem gamblers from gaining personal access to electronic gaming machines and other gambling devices or services whilst either physically present at a gambling venue or through their remote access to a gambling venue or gambling service via the internet, interactive television, intranets, extranets, telephones or other digital communication services.

### **A KEY TARGET**

Electronic gaming machines (sometimes referred to as poker machines or slot machines) will be an initial key target of this invention, as they have grown in popularity across the globe in recent decades. Their increasing popularity has also led to a significant rise in problem gambling being experienced by a rising percentage of gamblers. In Australia over one third of all player losses on poker machines is estimated to come from problem gamblers (Productivity Commission Report on Gambling).

Governments have attempted to restrict problem gambling by restricting the environments of electronic gaming rooms (via lighting controls, the installation of clock displays, displaying of problem gambling advice notices, initiating smoking restrictions in gaming rooms etc) and by restricting the machines themselves (limiting the number of machines, limiting the denomination of bank notes accepted by the machines, slowing machine game rates and creating maximum bet limits on a single wager etc).

Unfortunately most measures introduced to date have been broad-brush approaches that have failed to reduce the incidence of problem gambling amongst poker machine players and have primarily resulted in severely limiting the playing experience of genuine recreational players.

The difficulty for the operators of poker machine venues and poker machine networks is that it is virtually impossible to detect a problem gambler from pure external observations (compared to the relative ease of detecting a person inebriated from alcohol or under the influence of drugs in the very same licensed venue).

Even once detected by a venue, a problem gambler can very easily move from venue to venue on a daily basis across a wide geographic region so as to avoid any further detection, and continue their habitual behaviour.

### **ACCESS TO OTHER FORMS OF GAMBLING**

Problem gamblers can also gain relatively easy and virtually anonymous access to a wide and growing range of alternative electronic gambling venues via the internet, interactive televisions linked to homes and businesses via cable or satellite, mobile telephone, direct computer linkages to gambling venues via ISDN, the internet and other means of telecommunication connection, any or all of which also place the personal financial resources of such gamblers at high risk.

The detection of problem gamblers and their elimination from gaining access to gambling venues, gambling devices and gambling services are overcome by this proposed technical solution, which restricts access to poker machines, internet gambling sites, mobile telephone, direct computer linkages to gambling venues, and interactive televisions for the purposes of gambling, and through other mediums defined later, to only those players who are genuine recreational players, and thereby completely disallowing access to identified problem gamblers.

### **ILLUSTRATIONS**

In order that the invention may be more clearly understood and put into practical effect there shall now be described in detail, preferred embodiments of a player control system in accordance with the invention.

### **ELECTRONIC GAMING MACHINES**

The first illustration relates to electronic gaming machines operating as a network of centrally monitored machines in a defined geographic region.

#### **THE ACCESS KEY**

Player access control is achieved by requiring all prospective players to be issued with a uniquely identifiable, personal and portable Universal Serial Bus (USB) storage device with flash memory or its equivalent (hereafter referred to as a USB Access Key), which can communicate directly or remotely to a USB port of a gaming machine or to a USB port of a centrally monitored electronic box connected to each gaming machine or gambling device, and to have all of each player's playing activities recorded on a central monitoring computer (in one variant of the invention) or on their personal USB Access Key (for a second variant of the invention) or on both their personal USB Access Key and a central monitoring computer (for a third variant of the invention) for all games played on all poker machines in all the gaming venues being monitored in a geographic region.

#### **INITIAL PLAYER REGISTRATION**

At initial mandatory player registration each person wishing to gain access to gambling services as a player will be required to present personal credentials confirming their true identity at a standard equivalent to that required at the time by the major banks in Australia (or the country of deployment) for customers wishing to establish their first account with a bank. Once their identity is confirmed they will be provided with their uniquely identifiable USB Access Key, and have a customer account established which contains their name, address, contact details, any other necessary details and agreement to be contacted by professional problem gamblers if they start exhibiting potential problem gambler player characteristics.

At registration all players will be given the opportunity to define their own pre-defined maximum daily and/or weekly and/or monthly and/or annual limits on gambling losses and duration of play.

**PLAYER MONITORING**

Players are then monitored by recording every poker machine player's individual and collective gambling wagers, wins, losses, games played and durations of play for every one of their bets at every poker machine they play in the geographic region, and then comparing this data to their own pre-defined daily and weekly limits on gambling losses and duration of play, and by also comparing their play to publicly recognised limits on reasonable gambling losses and durations of play on a daily and/or weekly and/or monthly and/or annual basis (eg Productivity Commission definitions of problem gambling behaviours in Australia being losses exceeding around \$12,000 per annum). In the absence of any publicly recognised limits being available, either direct market research will be undertaken across a representative sample of the adult population to determine acceptable limits of annual spend and gambling duration on poker machines, or the government controlled gambling authority will be asked to define or approve such a value.

**PLAYER CLASSIFICATION**

Potential problem gamblers are those whose aggregate daily and/or weekly gambling losses and/or durations of play exceed their own limits set at initial player registration (or later updated by the player in a manner which is not beyond an agreed multiple of normal annual inflation or annual Consumer Price Indexes increases or which are regarded as acceptable by qualified and approving problem gambling counsellors) or exceed the limits publicly recognised as exhibiting problem gambling characteristics. Recreational players are those who do not exceed any such limits.

**STORAGE OF THE COMPARATIVE DATA**

Both sets of data i.e. player pre-defined limits on losses and duration of play (and publicly recognised limits on reasonable gambling losses) and actual player losses and duration of play, are recorded against the player's profile on a central monitoring computer connected to every gaming machine (in one variant of the invention) and/or on the personal USB Access Key issued to every player (in second and third variants of the invention).

**COLLECTION OF PLAYING DATA**

Actual player losses and durations of play are obtained by ensuring in order to activate any poker machine, a player must first confirm their true identity as the original owner of the USB Access Key, as discussed more extensively in the later section on ENTRY CONTROL VARIATIONS. A central monitoring computer and/or the USB Access Key will then continuously record in a digital manner all player losses and durations of play from all machines and games played by the player, and aggregate this behavioural data over time in the designated storage facility.

**USE OF PROBLEM GAMBLING COUNSELLORS**

If a player exceeds their own or any publicly recognised reasonable limits on losses or duration of play then they will be counselled by professional problem gambling counsellors and encouraged to modify their compulsive gambling behaviours. If this isn't successful then all such players upon advice from the

professionally recognized counsellors will be completely restricted from playing poker machines until they can once again demonstrate reasonable gambling behaviours.

#### **ENFORCING RESTRICTIONS**

These restrictions will be enforced at all gaming rooms in a specified geography, by requiring every player to present themselves and their personal USB Access Key at all gaming rooms and/or all gaming machines, prior to being given player access to any gaming machines in the venue.

#### **CONFIRMING IDENTITY**

It will be necessary to firstly confirm that the identity of the person presenting himself or herself is the same as the identity of the original USB Access Key owner. This will be done by applying one or more of a range of options available with the USB Access Key (from simple photo ID matching between the person and any photograph implanted on the face of, or in another variant stored digitally inside, the USB Access Key device; to Personal Password matching the users proposed Password to the actual Password of the real owner stored on the USB Access Key; through to matching of the fingerprint profile or profiles (and possibly other biometric characteristics in other variants of the invention) of the person presenting themselves to the gaming room venue or gaming machine with those of the real owner of the USB Access Key designated at a time of original player registration, which are stored digitally inside the USB Access Key).

#### **PLAYER ANALYSIS TO ALLOW CONTINUED PLAY**

Once player identification is confirmed, electronic analysis of the players past playing activities will be analysed on the central monitoring computer (in one variant of the invention) and/or on the player's USB Access Key (in a second and third variant of the invention) and a determination made as to whether the player is actually a recreational player or a potential problem gambler by direct digital comparison of actual player losses and durations of play with those registered and stored in the USB Access Key and/or the central monitoring computer at original registration (or subsequently updated).

Only recreational players who are not exceeding both their own pre-defined and also the publicly accepted pre-defined limits on money losses to date and total duration of play to date will be allowed access to the gaming equipment in the gaming venue. All players exceeding either their own pre-defined limits or the publicly accepted limits will be excluded from gaining access to the gaming room or in the alternative denied access to any gaming equipment.

#### **VOLUNTARY EXCLUSION**

Individual problem gamblers who voluntarily wish to be excluded from any or all gaming rooms or any or all gaming machines will be able to have their personal USB Access Keys pre-set for such arrangements.

#### **ENTRY CONTROL VARIATIONS**

In a most basic alternative of the invention, in order for entry controls to be exerted at a single physical entrance to all gaming rooms it would be necessary

for all gaming rooms to have floor to ceiling walls to exclude entry at all points other than their entrance. Players wishing to enter the gaming room would be required to match their identity to that stored on or by alternative within their USB Access Key. All authorised players wishing to leave a gaming room may also be required to match their identity characteristics to those stored on or in their personal USB Access Key at the same place as entry.

In another alternative, digital barriers to entry (as alternatives to physical barriers of entry) would be exercised whereby all prospective players would be required to match their fingerprint (or other biometric characteristics) to that stored on their personal USB Access Key at the time of original player registration, at a designated point at the gaming venue. Once confirmed as the true owner of the USB Access Key, their USB Access Key would be digitally activated to allow the owner to have access to all gaming equipment and gambling facilities in that venue for the duration of their current visit or for a pre-defined and specified duration. Those people, whose fingerprint(s) (or other biometric characteristics) did not match those on the USB Access Key they present, would not have their USB Access Keys digitally activated for access to any gaming equipment at the venue for a pre-defined duration.

In a more intensive alternative at the micro level, all players would present themselves at a gaming machine. They would insert their USB Access Key into the gaming machine and the USB Access Key would require the person inserting the device to confirm that their fingerprint(s) (or other designated biometric characteristics) are the same as those stored on the USB Access Key by the original owner of the USB Access Key at the time of original registration of the player and the device. If a correct match occurs then the player is allowed access to the gaming machine and his/her gambling behaviours (i.e. money lost and won, wagered and duration of play on every game etc) will be monitored and stored on the USB Access Key itself if the gaming machine is not being centrally monitored, or stored on the USB Access Key itself and/or at a central monitoring facility if the gaming machine is being centrally monitored.

#### **PROTECTION OF ACCESS KEYS**

The USB Access Key would be programmed to terminate play for players who are inactive in their gambling for a defined period of time, or for uncharacteristic playing behaviour in terms of either wagers, losses or duration of play, and would only be restarted by further re-confirmation of the identity of the original owner. This will eliminate risks of USB Access Keys being left in devices and used by other players.

#### **APPLICATION TO ALTERNATIVE FORMS OF GAMBLING**

With respect to Internet, intranet and extranet gambling sites, interactive television gambling channels and services, and other directly connected gambling devices activated by the player through other telecommunication services (e.g. WAPP, SMS, ISDN, mobile telephone, GPRS, 3G, 2.5G, satellite, cable, microwave, electronic photons, lightwaves etc) the player would similarly be initially registered with associated collection of their personal details and agreements at standards equivalent to those outlined in the electronic gaming example.

Registered players would then be required to insert their personal USB Access Key into the physical device or its associated equipment connecting the device to the player and the service provider (e.g. via their television, television set top box, pay television subscriber box, Personal Digital Organiser, mobile telephone, Smartphone, telephone, laptop computer, or desktop computer etc) firstly confirming that the fingerprints (or other designated biometrics) of the requesting user is/are in fact the fingerprints (or other biometrics) of the original owner of the original USB Access Key at the time of original player registration and allocation of the USB Access Key.

Once confirmed as the original owner of the USB Access Key, the players' devices would be programmed to allow the user continued access to the gambling facility or its gambling services whilst their accumulated player behaviours are within their own limits or publicly accepted limits of recreational gamblers. The USB Access Key would be programmed to accumulate the gambling behaviours of the player (both in terms of money spent and money won and money lost) as the player is connected to the gambling service remotely. If limits are exceeded and problem gambling counsellors are not able to be satisfied that the registered player is a recreational gambler and not a problem gambler, then the player's USB Access Key will be locked to disallow them any further access to the gambling service until their player behaviours are satisfactorily modified to a level of satisfaction agreed to by their counsellors.

#### **SINGLE PROVIDER USAGE VERSUS HOLISTIC USAGE**

The USB Access Key could be unique to each individual gambling service provider or could be programmed by multiple gambling provider cooperation or government regulation, to accumulate the player behaviours of a single player on a single USB Access Key that is used across all agreed or approved gambling venues or service providers (including gaming, wagering, lotteries etc).

#### **EXTENDED USES OF THE ACCESS KEY**

The USB Access Key may have the storage capacity and technical capabilities to store digital currency in an electronic purse which is transferred to the device by a player's financial institution or other currency provider in order to allow cashless gaming. In cashless gaming the digital currency may be used to wager and thereby depleted in value, and/or have any winnings accumulated to its value whilst engaged in gambling.

The USB Access Key would also have the ability to be activated for remote USB connectivity or Radio Frequency Identification (RFID) of the player for a pre-defined period of time once the player's identity has been confirmed as the original owner of the USB Access Key. Once identity is confirmed, gambling access is achieved by ensuring the Access Key contained a single unique piece or group of binary digits of information to indicate the owner's presence via remote USB transmission or via radio frequency transmission through an RFID reader which can detect the transmission of the unique ID binary digits during a pre-defined period of time. The player can then simply swipe their Access Key in the vicinity of the device used for gambling services and have their gambling behaviours collected remotely or via radio frequency transmission

**ADVANTAGES OF THE ACCESS KEY**

The use of a Universal Serial Bus storage device as a personal Access Key offers many significant advancements and advantages for players and providers of gambling facilities and services.

The major advantage of USB devices is that connection plugs for Universal Serial Bus devices are now ubiquitous on desktop computers and laptop computers, and are provided as standard equipment on such devices.

Those devices not currently providing USB access can be converted to USB status very quickly and very cheaply due to the open structure standard environment created for USB devices globally.

USB storage devices with biometric fingerprint ownership confirmation are now being commercially provided by a range of manufacturers such as Sony in Japan with their Sony Puppy and from Lexuscom in Taiwan with their BioDisk Biometric Flash Disk

USB storage devices also offer cost and access advantages as well as greater storage capacity (currently at levels around 512 Megabytes) over other devices such as smartcard devices which are not automatically provided as standard equipment with desktop computers, laptop computers, and other technological devices; require the additional expense of specific smartcard readers; and are very limited in their storage capacities.

USB devices will also store all types of files such as text files, graphics, programs, music and multi-media, which make them very versatile to changing customer needs and environments, including the direct downloading of a player's favourite games. Typical USB storage devices will currently operate at over one million insertions and removals of the unit into and out of electronic devices and their memories last at least 10 years.

**INTERFACE OF THE ACCESS KEY WITH CURRENT LOYALTY PROGRAMS**

Another advantage of the USB Access Key is that it offers an increased level of sophistication (i.e. unique player identification and authentication) over current player loyalty programs, but can still simply interface with all such loyalty programs whether they utilise magnetised cards or smartcards. In other words such loyalty programs can co-exist with this invention providing the added value of confirming player identity.

Current loyalty providers will not be required to convert to a new uniform standard of equipment which forces them to change their current investments in both past hardware and software development. All that is required is for the loyalty program providers to gain initialised upfront confirmation of the owner's true identity via this USB Access Key prior to activating their unique loyalty program hardware and software services for the player.



## **iGAMING**

The USB Access Key lends itself to resolving the user identity issues confronted by governments currently reluctant to allow their citizens to gamble on digital superhighways.

Currently U.S. law prohibits Internet wagering. U.S. government officials defend their laws saying on-line gambling is dangerous because it cannot prevent under-aged wagering. This identity problem is resolved through use of the digital Access Key, which can immediately identify the bona fides of all on-line gamblers.

The current prohibitions by governments are not sustainable in the long term because their current bans on domestic internet gambling are only encouraging their citizens to gamble with overseas internet and wagering services, which pay no taxes to the local domestic government.

Worldwide there are now an estimated 2,200 on-line gambling sites. Global Internet gambling increased from around A\$3 billion in 2000, to around A\$6 billion in 2002, with revenues forecast to reach A\$18 billion in 2006.

In light of increasing iGaming usage and an inability to capture taxation revenues from overseas gambling providers, national and state governments will need technologies that provide confirmation of player identity (to ensure under age gamblers are restricted), combined with capabilities to restrict domestic players to interface with only their local domestic gambling providers (in order to capture full taxation benefits), ideally overlaid with technology that detects and restricts any growth in the incidence of problem gambling.

The Access Key provides instant laptop and PC connectivity for over 1 billion computer users with USB connectivity (i.e. users do not need to purchase additional magnetic or smartcard readers).

USB connectivity is also currently being deployed for Personal Digital Assistants (PDAs) and shortly to global mobile telephones.

Deployment of a iGaming solution to a country such as Australia would involve the creation of a specific single gambling portal site which would be a government mandated accessible entry gate available to online gambling for Australians. This site would provide links to all government accredited gaming, wagering, sports betting, lottery and other approved gambling providers licensed, regulated and taxed in Australia.

Australian Internet users wishing to gamble would log onto this master portal, activate their biometric USB device on their PC by confirming their fingerprint identity, and then would be allowed to gamble with all gambling providers in any manner designated and permitted by each individual gambling service provider and their associated state regulator.

Access to the portal interface would be managed by a government accredited supplier (to ensure user identity matching criteria interfaces are activated and confirmed), and

each gambling service provider accessible from the master portal would be required to provide the supplier with a summary of each gambling session by each player (e.g. duration of gambling, amount wagered, amount won or lost) which would be accumulated to the player's USB device during or at the conclusion of each gambling session.

By being able to identify on line gamblers and ensure that only recreational gamblers are gambling, this iGaming solution allows expansion growth in the range of internet gambling activities hitherto banned due to their previously perceived potential of increasing problem gambling and underage gambling.

Specifically the solution would allow for the introduction of:

- On line Casino gambling for Australians,
- On line poker machine betting for Australians
- On line *ball-by-ball* betting after the commencement of a sporting event for Australians
- *In-the-run* betting on the final outcome of a sporting event after commencement.

Such control mechanisms would allow for the creation of a viable on-line casino and expanded sports betting model for Australian citizens, corporations and governments. It is already known that the dominant forms of interactive gambling across the globe are currently internet casino gaming and sports betting, which together constitute 85% of on line gambling revenue, and 93% of internet gambling activity.

This solution is also transportable to other global jurisdictions.

### CLAIMS

1. A personal Storage Device with memory which can store the unique biometrics of its registered owner for the purposes of identification; can record the unique biometrics of any person attempting to use the device; can confirm whether the user is the registered owner of the device; can control access to electronic devices and their consumption; can monitor and record the operational activity of its user; can store pre-defined value, duration and budgetary constraints; can compare operational activity to pre-defined values, durations and budgetary constraints; can store legal tender value; can visually indicate when it is electronically operative; can be electronically locked and de-activated; and can connect and communicate directly or remotely to other electronic devices.
2. A personal Storage Device in accordance with claim 1 wherein the Storage Device additionally has its own microprocessor capacity for undertaking the processing of binary digit calculations for the purposes of data storage, data comparison, data manipulation and data analytics of alphanumeric and image data.
3. A personal storage device in accordance with claims 1 and 2 that can store data in an encrypted format for data protection and can store digital certificates to ensure only authorised parties can transmit or receive data to or from the device.
4. A personal Storage Device in accordance with claims 1, 2 or 3 wherein the device is a Universal Serial Bus (USB) device with in built memory.
5. A Storage Device in accordance with claims 1, 2, 3 or 4 which is used in the gambling industry to monitor gamblers.
6. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 wherein the Storage Device can be locked and become inoperable to prevent a person from gaining access to the Storage Device for a defined period of time if the attempted user is not confirmed to be the registered owner of the original device.
7. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 wherein the confirming means of identification includes the use of a biometric fingerprint identification system or other biometric identification characteristics or a personal identification number (PIN) or a password or an external photograph on the outside of the device of the registered owner of the device, or a digital photograph of the registered owner stored internally in the device, or an answer to a specific question associated with the registered owner.
8. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 wherein individual users can pre-record their desired total gambling financial loss information over pre-defined periods of time and their desired total desired durations of gambling over pre-defined periods of time and have these associated with, and even stored within the Storage Device
- 9 A Storage Device in accordance with claim 8 wherein the pre-defined recorded periods of time associated with each device are daily, weekly, monthly and annually.

10. A Storage Device in accordance with claims 8 and 9 wherein the desired gambling financial loss information and total desired durations of gambling within the pre-defined periods of time are stored on a central monitoring computer to which the device can be connected, and if required can also be stored simultaneously on both the Storage Device and the central monitoring computer.

11. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 wherein each individual player's gambling activities as to individual gambling financial bet outlays, individual gambling bet wins, individual gambling bet losses, individual gambling incidents and individual durations of gambling activities are recorded on the Storage Device.

12. A Storage Device in accordance with claim 11 wherein such data is stored on a central monitoring computer to which the device can be connected, and if required can also be stored simultaneously on both the Storage Device and the central monitoring computer.

13. A Storage Device in accordance with claims 1, 2, 3, 4, or 5 wherein each individual player's gambling activities with respect to aggregate gambling financial bet outlays, aggregate bet wins or losses, aggregate gambling incidents, and total duration of play are recorded on the Storage Device for pre-defined periods of time such as daily, weekly, monthly, and annually.

14. A Storage Device in accordance with claim 13 wherein such data is stored on a central monitoring computer to which the device can be connected, and if required can also be stored simultaneously on both the Storage Device and the central monitoring computer.

15. A Storage Device in accordance with all preceding claims that compares actual gambling losses and duration of play to a player's pre-determined desired gambling losses and duration of play on a daily, weekly, monthly or annual basis, and is electronically locked and de-activated either by itself or by a central monitoring computer if the pre-determined financial or duration limits are exceeded in any pre-determined period of time.

16. A Storage Device in accordance with claim 15 that uses a central monitoring computer to undertake the appropriate calculations and device de-activation

17. A Storage Device in accordance with all preceding claims that compares actual gambling losses and duration of play to pre-determined publicly recognized or government mandated reasonable gambling losses and duration of play on a daily, weekly, monthly or annual basis, and is electronically locked and de-activated either by itself or by a central monitoring computer if the publicly recognized financial or duration limits are exceeded in any pre-determined period of time.

18. A Storage Device in accordance with claim 17 that uses a central monitoring computer to undertake the appropriate calculations and device de-activation

19. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 whereby individual gamblers who voluntarily wish to be excluded from accessing all or some specific gambling facilities and/or all or some specific gambling devices and/or all or some

gambling services will be able to have their personal Storage Device pre-set for such restricted access arrangements.

20. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 wherein, in order to successfully gain physical entry and/or exit to a gambling venue, gamblers will be required to match their identity to that stored on or within their Storage Device.

21. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 wherein, in order to successfully gain physical access and/or exit to a gambling venue all prospective players would be required to match their identity to that stored on their personal Storage Device at the time of original player registration, at a designated point at the gambling venue, and those people, who could not digitally match their identity to that stored on the Storage Device, would not have their Storage Device digitally activated for access to any gambling equipment at the venue for a pre-defined duration.

22. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 wherein in order to play on a gambling device, all players would insert their Storage Device into the gambling machine or the telecommunications device facilitating gambling and be required to confirm that their fingerprint(s) or other designated biometric characteristics are the same as those stored on the Storage Device by the original owner of the Storage Device at the time of original registration of the player and the device, so that if a correct match occurs then the player is allowed access to the gambling device or service and his/her gambling behaviours such as money lost and won, wagered and duration of play on every game will be monitored and stored on the Storage Device itself if the gambling device is not being centrally monitored, or stored on the Storage Device itself and/or at a central monitoring computer facility if the gambling device is being centrally monitored.

24. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 which is programmed to de-activate or lock out any further use for a pre-defined period of time whenever players using the device are inactive in their gambling for a continuous defined period of time, or for detected uncharacteristic playing behaviour in terms of either their wagers, losses or duration of play, and the Storage Device can only be restarted by further re-confirmation of the identity of the user to equal that of the original registered owner after meeting the pre-defined deactivation period of time..

25. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 which controls a person's gambling activities with respect to Internet, intranet and extranet gambling sites, interactive television gambling channels and services, and other gambling services provided through the use of electronic devices such as telephones, mobile phones, personal digital organizers, Smartphones, laptop computers, desktop computers, televisions, television set top boxes, activated by the player through telecommunication services such as WAP, Short Message Service, ISDN, General Packet Relay Switching, third generation mobile phones, 2.5 generation mobile phones, satellite, cable, microwave, electronic photons, lightwaves, Bluetooth or remote USB, using controlling mechanisms to confirm identity and compare gambling losses and duration of play to pre-determined limits set by the player and limits known to be in the public interest, through direct connection or remote connection of the Storage Device to the physical device offering a gambling facility.

26. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 which has the storage capacity and technical capabilities to securely store legal tender in the form of digital currency in an electronic purse, which can be transferred to the device by a player's financial institution or other currency provider in order to allow cashless gambling where the digital currency may be used to wager and thereby be depleted in value, and/or have any winnings accumulated to its value whilst engaged in gambling, and then be re-converted to legal tender if required.

27. A Storage Device in accordance with all preceding claims which can be unique to each individual gambling service provider or which can be made available to multiple gambling providers through commercial cooperation or government mandate, to accumulate a single gambler's behaviours such as wagers, wins, losses, durations of play on a single USB Storage Device used across all agreed or approved gambling venues or service providers including gaming, wagering, and lotteries, and which would be de-activated if aggregate individual player financial or duration limits across all service providers of gambling or across pre-determined limits for any one individual service provider of gambling are exceeded, or individual publicly acceptable or government mandated limits, are exceeded.

28. A Storage Device in accordance with all preceding claims which can connect directly or remotely to an electronic devices USB connectivity point and authenticate and identify the current user to be the original registered owner of the USB Storage Device, and then allows the user to connect to a unique website through which they can gain access to multiple service providers of gambling and have their gambling monitored and their access denied to the web site and/or the web sites service providers if their gambling exceeds any pre-defined limits associated with their unique storage device.

29. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 which can connect directly or remotely to a computer's USB connectivity point and authenticate and identify the current user to be the original registered owner of the Storage Device, and then allows the user to connect to a unique website through which they can gain access to multiple service providers and have their activities monitored and their access denied to the web site and/or the web sites service providers if their activities exceeds any of their own or the service providers or a government regulators pre-defined limits.

30. A Storage Device in accordance with all preceding claims which can connect directly or remotely to the connectivity point of any telecommunications device such as a television, telephone, mobile telephone, personal organizer, Smartphone, and then authenticate and identify the current user to be the original registered owner of the Storage Device, and then allows the user to connect to a unique service provider master portal through which they can gain access to multiple service providers of gambling and have their gambling monitored and their access denied to the master portal if their gambling exceeds any pre-defined limits.

31. A Storage Device in accordance with claims 1, 2, 3, 4 or 5 which can connect directly or remotely to the connectivity point of any telecommunications device such as a television, telephone, mobile telephone, personal organizer, Smartphone, and then authenticate and identify the current user to be the original registered owner of the Storage Device, and then allows the user to connect to a unique service provider master

portal through which they can gain access to multiple service providers and have their activities monitored and their access denied to the master portal if their activities exceed any of their own or the service providers or a government regulators pre-defined limits.

32. A Storage Device in accordance with all preceding claims which can have its individual customer pre-set gambling limits and/or publicly recognized or government mandated reasonable gambling financial limits automatically updated by acceptably annual increases due to the effects of inflation etc.

33. A Storage Device in accordance with all preceding claims which can have its individual customer pre-set gambling limits updated upon a customers request which is regarded as acceptable by the operators of the Storage Device and as acceptable by any associated government gambling regulator.

34. A Storage Device in accordance with all preceding claims which operates using remote USB or Radio Frequency Identification (RFID) means to communicate between itself and electronic devices.

35. A system of gambling that restricts access to gambling to only those players who use a USB Storage Device in accordance with all preceding claims, which has not been deactivated, and requiring every player to present themselves and their Storage Device at all gambling venues or devices to confirm their identity ownership of the device and to confirm their gambling is within their own acceptable limits or acceptable public limits and that their device has not therefore been de-activated to stop their further gambling.

36. A system of gambling including: (a) identifying a person; (b) issuing a person with a unique and identifiable USB Storage Device which they must use in order to be able to gamble; (c) utilizing unique personal identification and authentication means to monitor the person's gambling activities across a range of gambling devices and gambling communication channels using the USB Storage Device; (d) setting limits on gambling behavior for each USB Storage Device owner in terms of both money which can be lost and duration of gambling by the person for pre-defined periods of time; and (e) providing linkage to financial sources for electronically transferring verifiable funds to the USB Storage Device which are able to be selectively transferred to the device when the user wishes to undertake a gambling activity.

37. A system for regulating gambling substantially as hereinbefore described using a USB Storage Device.

# INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/AU2005/000502**

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> Int. Cl. <sup>7</sup> : G06F 17/00, A63F 13/00 According to International Patent Classification (IPC) or to both national classification and IPC					
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI, PCT, USPTO (problem gambling, responsible gambling, behaviour, compulsive, biometric, usb, rfid, smartcard, etc.)					
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>					
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.			
X	US 2003/0022719 A1 (DONALD et al), 30 January 2003 the whole document	1-37			
X, P	WO 2005/022453 A1 (FLANAGAN), 10 March 2005 the whole document	1-37			
X, P	WO 2004/056432 A2 (TECHLINK INTERNATIONAL ENTERTAINMENT), 8 July 2004 the whole document	1-37			
<input type="checkbox"/> Further documents are listed in the continuation of Box C <span style="margin-left: 100px;"><input checked="" type="checkbox"/> See patent family annex</span>					
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;">           * Special categories of cited documents:            "A" document defining the general state of the art which is not considered to be of particular relevance            "E" earlier application or patent but published on or after the international filing date            "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)            "O" document referring to an oral disclosure, use, exhibition or other means            "P" document published prior to the international filing date but later than the priority date claimed         </td> <td style="width: 33%; vertical-align: top;">           "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention            "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone            "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art            "&amp;" document member of the same patent family         </td> <td style="width: 33%;"></td> </tr> </table>			* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family	
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family				
Date of the actual completion of the international search 22 July 2005		Date of mailing of the international search report <b>28 JUL 2005</b>			
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  <b>MATTHEW HOLLINGWORTH</b> Telephone No : (02) 6283 2024			



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

**PCT/AU2005/000502**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
US	2003022719	AU	34078/00	AU	35244/01
		NZ	513624	NZ	521168
		WO	0163439	GB	2363658
				WO	0058858
WO	2005022453	NONE			
WO	2004056432	AU	2003294527	US	2004121841
				US	2005064938
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					